

T D
525
S28A27

UC-NRLF



B 3 255 042



EXCHANGE



EX LIBRIS

new

104

REPORT
— OF THE —
CITY ENGINEER
— OF A —
SEWER SYSTEM
FOR SAN FRANCISCO

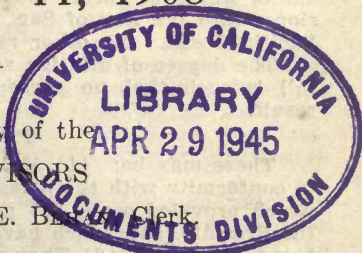
AS MADE TO THE
BOARD OF SUPERVISORS
IN CONNECTION WITH THE
PROPOSED BOND ISSUE

SUBMITTED TO THE VOTERS

MONDAY, MAY 11, 1908

Published by Authority of the
BOARD OF SUPERVISORS

JOHN E. BEEBE, Clerk.



THE CONSTRUCTION OF A SEWER SYSTEM.

DATA AVAILABLE.—Fortunately very extensive studies have been made of this problem and printed reports of the results are available. However, all the original notes and large scale maps of existing and proposed sewers were destroyed in April, 1906, but the undersigned and several members of the engineering staff of the City Engineer's office were employed on the original work.

The following printed reports are available.

"Progress Report of the Engineers in Charge to Devise and Provide a System of Sewerage," (1892-1893), Board of Engineers, Prof. Davidson, Col. Mendell, M. Irving Scott, Marsden Manson and C. E. Grunsky.

"Report Upon a System of Sewerage," C. E. Grunsky, Marsden Manson, Chas. S. Tilton, City and County Surveyor, and Rudolph Hering, Consulting Engineer, 1899.

"Report Upon a Sewerage System for San Francisco, Cal.," by C. E. Grunsky, City Engineer. Date, June 30, 1903. Municipal Reports, San Francisco, 1902-1903.

Studies and modifications of the above under the Board of Public Works, 1900-1907, by City Engineer Grunsky and Principal Assistant Engineer Connick.

These data are made use of in the preparation of this report.

TOPOGRAPHY OF THE PENINSULA.

The topographical features of the peninsula on which San Francisco is built have been quite fully described in the reports previously made, and are fully detailed on the printed maps accompanying these reports.

The City and County is in the shape of an irregular square, with sides nearly seven miles long and running north and south and east and west; out of the northwest corner of this irregular square a smaller one about four square miles in area, is cut out. The east and north shores on the peninsula are washed by the waters of the bay, and the west by the Pacific Ocean.

The natural watersheds are, therefore, three: westwardly into the ocean; eastwardly into the bay; and northerly into the bay and Golden Gate. The ridge dividing the ocean drainage from that of the bay crosses the southern boundary of the county near its median point and extends in a nearly direct line to Fort Point. The elevations of this ridge range from 250 to 900 feet. Thus, by far the greater portion of the area permits of rapid gravity drainage. This ridge, together with the minor subdivision ridges control the division of the city and county into sewage districts.

DISPOSITION OF DRAINAGE AND SEWAGE.

The topography of the peninsula of San Francisco is such that its drainage of whatever nature must be discharged from its easterly and northerly slopes into the Bay of San Francisco and from its westerly slope into the Pacific Ocean. No other rational and economic disposition is possible.

The degree of dilution secured by the solution of proper points of outfall is such that no perceptible pollution of the waters of the bay can result.

POINTS OF OUTFALL.

These may be: (1) Multiple, or to the most direct points of discharge in conformity with the plans more or less, followed prior to January, 1900, which provided some 125 points of discharge between Hunter's Point and the Presidio, and which have resulted in the nuisances now existing on the bay frontage; or (2) They may be selected as recommended in the reports above referred to, and which are reaffirmed in this report.

197
New
Decree
24

The selected points were chosen by reason of the strong tidal currents which sweep between them and the shore, thus giving maximum dilution of sewage, together with its entire removal from the shores of the bay and ocean.

In selecting these points of outfall the following principles have been observed.

1st. To remove and suppress the present nuisances around the bay frontage from Butchertown to Washerwoman's Bay, notably at Islais Creek, Channel street, the foot of Brannan, Washington, Pacific, Powell and other streets, by collecting the sewage in large mains and discharging it only at selected points where tidal currents will sweep it into deep water, distribute and dilute it to the maximum extent, and thus to make the shore waters of the bay adjacent to the wharves and docks clean and pure.

2d. To preserve forever from any taint or appearance of contamination the waters and shores of the beach at and south of Point Lobos.

These selected points of discharge were determined upon only after a series of observations by means of floats conducted during all stages of the tides and over a period of three months and a critical study of the results.

The points at which the sewage will ultimately be discharged are:

1. Off Hunter's Point.
2. Off the northerly termination of Dupont street.
3. Off the northerly termination of Pierce street.
4. Off Mile Rock Point.

The plans are as follows:

1. To conduct by gravity by means of sewers in Milliken street and Visitation avenue, the sewage from Visitation Valley to a temporary outfall in the bay just north of the southerly boundary line of the City and County.

2. To conduct by gravity all of the sewage, together with that fraction of the drainage due to a rainfall of $\frac{1}{4}$ of an inch in twenty-four hours from the Hunter's Point district, as shown on the accompanying plan, the aggregate area of which is over 2,300 acres.

The main sewer will commence at Mission and Springdale streets and follow along the best grades and alignments in a general easterly and southeasterly direction to Fifth avenue and H street, where it will discharge temporarily into the waters of the bay; eventually it is to be continued to Hunter's Point, and carried into the deep waters of the bay, well off shore.

Ultimately this gravity main will receive by pumping the sewage from the flat districts south of Islais Creek Channel and from those to the north of South Basin. At selected points drainage in excess of the rainfall above noted is to be carried by relief sewers along the most direct lines of the bay. The temporary outfall above noted is to serve as a future storm water outlet.

NORTH POINT MAIN.

This main will commence at Treat avenue and Twenty-ninth street, where it receives several sub-mains and will be located thence along the best grades and alignments to the outfall point, receiving en route the several sub-mains serving the sub-districts of this district. In this location due regard will be had to the results of studies now in progress as to the stability of the foundations at certain points.

At selected points this main is to be relieved of drainage water, in excess of the rainfall named, and this excess storm water conducted by gravity relief sewers to the most convenient points of discharge in the bay or its tidal estuaries. The main will serve about eighty per cent of

the present population. The separate system and pumping stations are necessitated by the following facts: Over the district east of Sansome and between the bases of Telegraph and Rincon hills, and over the flat area between Howard street and Central Basin, officially established grades are too low to give adequate basement and sanitary drainage; hence, these districts must be separately sewered for these purposes; and storm drainage waters must be carried by large sewers to the most suitable and convenient points of outfall on the water front and on Channel street.

UPPER ISLAIS CREEK SEWER DISTRICTS.

In the earlier studies made of the disposition of sewage from the upper Islais Creek sub-districts, preference was given to passing this sewage through the divide by tunnel and delivering it into the North Point main; and to divert surface flood waters down Islais Creek. This preference was given by reason of the fact that at that time the early construction of the North Point main was probable, and that the construction of an outfall to Hunter's Point would be delayed for some definite period and a temporary outfall made use of at N street South and Fifth avenue South, which is an undesirable point at which to concentrate a large amount of sewage.

The alternate proposition of carrying this sewage to the Hunter's Point outfall, under the changed conditions which have elapsed since these first studies were made, has not been given the necessary study by reason of lack of time. The modified route will be more fully considered, and the conditions should be made sufficiently elastic to permit of its adoption, should these studies show such modifications to be preferable.

3. To collect and discharge by gravity mains off the northerly termination of Pierce street all sewage and drainage originating north of the summit of the ridge commencing at Black Point and encircling to the southwest and west the north slope of the bay drainage, aggregating about 800 acres. This district is designated as Harbor View district in the report of 1899.

The mains necessary to drain this district are in part constructed. They are to be completed and extended to the proper point of discharge well off shore.

4. To collect by gravity mains all sewage and drainage from the entire ocean slope of the peninsula, and discharge the same at Mile Rock outfall in the ocean currents washing that point. (For details of these districts and sub-districts see the reports above referred to, and maps, etc., on file in the City Engineer's office, to which special reference is hereby made.)

This main will commence at W street, near Forty-fifth avenue, and will extend thence northerly along the best grades and alignments to the Mile Rock outfall, receiving along its route the sub-mains from the Ocean View district, Sunset district and West Richmond district.

At present the sewage from the Richmond district is being discharged into the ocean opposite the northerly termination of Twenty-seventh avenue, or at the southerly end of Baker's Beach.

Ultimately it will be desirable to construct a tunnel and discharge this sewage at Mile Rock, the present outfall remaining in use as a point for storm water disposal.

These five districts will cover the entire city and county, and the mains herein proposed will be built with a full consideration of probable increase in their population.

CAPACITIES OF SEWERS.

The sewers are proposed to carry the sewage and the maximum amount of runoff due to the periods of intensely heavy rainfall indicated on the rainfall intensity diagram hereto appended.

Wherever necessary the mains of each district are to be relieved of discharge in excess of sewage and one-fourth of an inch of rainfall per twenty-four hours. This excess is to be carried by relief sewers to the most convenient outfall point. The relief sewers will be called into use on the average less than thirty days each year, and may be expected to serve up to their full capacity about once or twice a year. Beyond the points of relief the mains will be reduced in capacity to the sewage plus the runoff due to one-fourth of an inch rainfall per twenty-four hours.

The sewers herein provided for will supply the necessary outfall to all the new and growing sections of the city as well as those now quite densely built up. It is intended that by the later construction of the necessary sub-mains and laterals no portion of the City and County shall be left without proper drainage and sewerage facilities. Detailed studies are being made with a view of reducing the area of some of the pumping districts, which are served by the separate system, by the introduction of gravity pressure mains.

PROPOSED SEWERS.

In order to indicate clearly which sewers are recommended for early construction the following table has been prepared. The estimate of cost covers the construction of all the sewers which are recommended for immediate construction, even in those cases where streets are not now ready to receive them and where several years may elapse before their construction.

The information in the tables relating to sewer sizes is given in detail so far as definiteness could be given to the location of sewers, except in the following cases:

In the case of Yerba Buena District, a complete system of sewers for the collection of sewage proper, are recommended for immediate construction, and are covered by the cost estimate.

In the case of Mission Flats District, the sewers embrace the entire system of sewers for sewage proper except a few local sewers on unimproved water-front property, and embraces also the sewers at once required south of Channel street.

All of the structures and devices of every kind, including manholes, connections with old sewers, relief outlets, pumping stations and out-fall works, which are necessary for the successful operation of sewers now recommended for construction, are to be considered a part of these sewers and are not specifically enumerated in the following table, but are covered by the estimate of cost.

Abbreviations used in the table are as follows:

N. North or northerly.

So. South or southerly.

E. East or easterly.

W. West or westerly.

Br. Brick. (Brick means either brick, or concrete and brick.)

Br. conc. means brick and concrete.

I. S. P. Iron-stone pipe.

Req. Required.

Pro. Proposed.

Prod. Produced.

Sta. Station.

R. O. W. Right-of-way.

Wd. Wood.

Conc. Concrete.

Extd. Extended.

Ret. Retained.

Rec. Recommended.

Itr. Intermediate.

TABULAR EXHIBIT

SHOWING PROPOSED NEW MAIN AND INTERCEPTING SEWERS, AND OLD SEWERS ON WHICH MORE OR LESS REPAIR WORK IS TO BE DONE, TO MAKE THEM A PART OF THE MAIN DRAINAGE SYSTEM; ALSO SHOWING AGGREGATE LENGTHS OF SEWERS FOR SEWAGE ONLY IN THE MISSION FLATS AND YERBA BUENA DISTRICTS, AND THE SEWERS RECOMMENDED FOR IMMEDIATE CONSTRUCTION.

NORTH POINT DISTRICT—MAIN SEWER.

Name of Street.	From	To	Length Feet	Material.	Pre-scribed Size.	Size of Old Sewer.
*San Jose Ave.....	Canal St.....	Thirtieth St.....	4158	Tunnel.	3' x4' 6"	
*San Jose Ave.....	Thirtieth St.....	Twenty-ninth St..	624	Br.-Conc.	3' x4' 6"	
*San Jose Ave.....	Twenty-ninth St..	Valley St.....	312	"	3' x4' 6"	
*San Jose Ave.....	Valley St.....	Duncan St.....	624	"	3' 6"x5' 3"	
*San Jose Ave.....	Duncan St.....	Twenty-seventh..	311	"	3' 6"x5' 3"	
*San Jose Ave.....	Twenty-seventh..	Army St.....	326	"	3' 6"x5' 3"	
‡Army St.....	San Jose Ave.....	Valencia St.....	322	"	6' 6"	5'
*Valencia St.....	Army St.....	Twenty-sixth St..	304	"	2' 6"x3' 9"	
*Twenty-sixth St..	Valencia St.....	Bartlett St.....	321	"	3' x4' 6"	
*Twenty-sixth St..	Bartlett St.....	Mission St.....	321	"	3' x4' 6"	
*Twenty-sixth St..	Mission St.....	Capp St.....	317	"	3' x4' 6"	
*Twenty-sixth St..	Capp St.....	Howard St.....	316	"	3' x4' 6"	
*Twenty-sixth St..	Howard St.....	Shotwell St.....	317	"	3' x4' 6"	
*Twenty-sixth St..	Shotwell St.....	Folsom St.....	316	"	3' x4' 6"	
*Twenty-sixth St..	Folsom St.....	Treat Ave.....	316	"	3' x4' 6"	
*Treat Ave.....	Twenty-sixth St..	Twenty-fifth St..	584	"	3' 6"x5' 3"	
*Twenty-fifth St..	Treat Ave.....	Harrison St.....	316	"	3' 6"x5' 3"	
*Twenty-fifth St..	Harrison St.....	Alabama St.....	272	"	3' 6"x5' 3"	
*Alabama St.....	Twenty-fifth St..	Twenty-fourth St..	584	"	3' 6"x5' 3"	
*Alabama St.....	Twenty-fourth St..	Twenty-third St..	584	"	5'	
*Alabama St.....	Twenty-third St..	Twenty-second St..	584	"	5'	
*Alabama St.....	Twenty-second St..	Twenty-first St..	584	"	5'	
*Alabama St.....	Twenty-first St..	Twentieth St.....	585	"	5'	
*Alabama St.....	Twentieth St.....	Nineteenth St.....	474	"	5'	
*Nineteenth St.....	Alabama St.....	Harrison St.....	362	"	5' 6"	
*Nineteenth St.....	Harrison St.....	Treat Ave.....	317	"	5' 6"	
*Treat Ave.....	Nineteenth St.....	Division St.....	587	"	6' 6"	
*Division St.....	Treat Ave.....	Seventeenth St..	609	"	6'	
*Division St.....	Seventeenth St..	Harrison St.....	654	"	6'	
*Harrison St.....	Division St.....	Fifteenth St.....	556	"	6'	
*Harrison St.....	Fifteenth St.....	Fourteenth St.....	584	"	6'	
*Harrison St.....	Fourteenth St.....	Thirteenth St.....	251	"	6' 6"	
*Harrison St.....	Thirteenth St.....	Twelfth St.....	263	"	6' 6"	
*Harrison St.....	Twelfth St.....	Eleventh St.....	270	"	6' 6"	
*Harrison St.....	Eleventh St.....	Tenth St.....	492	"	7'	
*Harrison St.....	Tenth St.....	Ninth St.....	492	"	7'	
*Harrison St.....	Ninth St.....	Eighth St.....	633	"	7'	
*Eighth St.....	Harrison St.....	Folsom St.....	632	"	7'	
*Eighth St.....	Folsom St.....	Howard St.....	633	"	7'	
*Howard St.....	Eighth St.....	Seventh St.....	907	"	7'	
*Howard St.....	Seventh St.....	Sixth St.....	908	"	7'	
*Howard St.....	Sixth St.....	Fifth St.....	907	"	7' 6"	
*Howard St.....	Fifth St.....	Fourth St.....	908	"	7' 6"	
*Howard St.....	Fourth St.....	Third St.....	907	"	7' 6"	
*Howard St.....	Third St.....	Second St.....	908	"	7' 6"	
*Second St.....	Howard St.....	Mission St.....	633	"	7' 6"	
*Second St.....	Mission St.....	Market St.....	651	"	7' 6"	
*Market St.....	Second St.....	Sansome St.....	356	"	7' 6"	
*Sansome St.....	Market St.....	Bush St.....	447	"	7' 6"	
*Sansome St.....	Bush St.....	Pine St.....	344	"	7' 6"	
*Sansome St.....	Pine St.....	California St.....	351	"	7' 6"	

*Recommended for immediate construction.

‡Existing sewer to be retained.

CHARACTER AND DIMENSIONS OF REQUIRED SEWERS.

NORTH POINT DISTRICT—MAIN SEWER.

Name of Street.	From	To	Length Feet	Material.	Pre- scribed Size.	Size of Old Sewer.
*Sansome St.....	California St.....	Sacramento St....	341	Br.-Conc.	7' 6"	.....
*Sansome St.....	Sacramento St....	Clay St.....	324	"	8'	.....
*Sansome St.....	Clay St.....	Washington St....	324	"	8'	.....
*Sansome St.....	Washington St....	Jackson St.....	324	"	8'	.....
*Sansome St.....	Jackson St.....	Pacific St.....	324	"	8'	.....
*Sansome St.....	Pacific St.....	Broadway.....	341	Tunnel.	8'	.....
*Sansome St.....	Broadway.....	Vallejo St.....	350	"	8'	.....
*Sansome St.....	Vallejo St.....	Green St.....	344	"	8'	.....
*Sansome St.....	Green St.....	Union St.....	344	"	8'	.....
*Sansome St.....	Union St.....	Filbert St.....	344	Br.-Conc.	8'	.....
*Sansome St.....	Filbert St.....	Greenwich St.....	344	"	8'	.....
*Sansome St.....	Greenwich St.....	Lombard St.....	344	"	8'	.....
*Sansome St.....	Lombard St.....	East St. N.....	402	"	8'	.....
*East St. N.....	Sansome St.....	Francisco St.....	432	"	8'	.....
*East St. N.....	Francisco St.....	Bay St.....	540	"	8'	.....
*East St. N.....	Bay St.....	North Point St....	550	"	8'	.....
*East St. N.....	North Point St....	Beach St.....	570	"	8'	.....
*Outfall.....	East St. N.....	Outlet.....	1200	C. I. P.	Two 60"	.....
*Screen house at	outlet.....					
*Overflow.....	Springdale and Mission Sts.....					
*Overflow.....	Valencia St. and Army St.....					
*Overflow.....	Treat Ave. and Eighteenth St.....					
*Overflow.....	Harrison St. and Fifteenth St.....					
*Overflow.....	Harrison St. and Fourteenth St.....					
*Overflow.....	Harrison St. and Eleventh St.....					
*Overflow.....	Seventh St. at Howard St.....					
*Overflow.....	Sixth St. at Howard St.....					
*Overflow.....	Fifth St. at Howard St.....					
*Overflow.....	Mission St. and Second St.....					
*Overflow.....	Sansome St. and Commercial St.....					
*Overflow.....	Sansome St. and Jackson St.....					

NORTH POINT DISTRICT—NORTH BEACH SUB-DISTRICT.

†Powell St.....	Vallejo St.....	Francisco St.....	2406	Brick.	3' 6"x5' 3"	3'x5'
†Powell St.....	Francisco St.....	North Point St....	688	"	6'	3'x5'
*Powell St.....	North Point St....	Beach St.....	344	"	6'	3'x5' Wd
*Beach St.....	Powell St.....	North Point Main.	950	I. S. P.	18"	.....
*Powell St.overflow	Beach St.....	Sea Wall.....	500	Brick.	6'	3'x5' Wd
†Bay St.....	Hyde St.....	Leavenworth St....	481	I. S. P.	12"	18"
†Bay St.....	Leavenworth St....	Jones St.....	481	"	18"	18"
*Bay St.....	Jones St.....	Taylor St.....	481	Brick.	2' x3'	16"
*Bay St.....	Taylor St.....	Mason St.....	481	"	3' x4' 6"	16"
*North Point St....	Mason St.....	Powell St.....	481	"	5' 6"	.....
†Battery St.....	Vallejo St.....	Green St.....	344	I. S. P.	21"	3'x5'
†Battery St.....	Green St.....	Union St.....	344	Brick.	2' x3'	3'x5'
†Battery St.....	Union St.....	Greenwich St.....	688	"	2' 6"x3' 9"	3'x5'
*Overflow.....	Powell St. and Beach St					

NORTH POINT DISTRICT—FIFTH STREET SUB-DISTRICT.

†Turk St.....	Hyde St.....	Market St.....	2050	Brick.	.....	3'x5'
†Eddy St.....	Jones St.....	Powell St.....	1444	"	.....	3'x5'
†Market St.....	Turk St.....	Fifth St.....	260	"	.....	3'x5'
†Grant Ave. and						
Market St.....	O'Farrell St.....	Powell St.....	1300	"	.....	3'x5'
*Powell St.....	Eddy St.....	Market St.....	100	"	3' 6"x5' 3"	3'x5'
*Market St.....	Powell St.....	Fifth St.....	160	"	4'x6'	3'x5'
*Fifth St.....	Market St.....	Howard St.....	1284	"	5'	3'x5'

*Recommended for immediate construction.

†Existing sewer to be retained.

CHARACTER AND DIMENSIONS OF REQUIRED SEWERS.
NORTH POINT DISTRICT—SEVENTH STREET SUB-DISTRICT.

Name of Street.	From	To	Length Feet	Material.	Pre- scribed Size.	Size of Old Sewer.
†McAllister St.	Gough St.	Jones St.	3370	Brick.	.....	{ 3'x5' 3'x5' 6"
†Market St.	Jones St.	Seventh St.	325	"	3' 6"x5' 3"	3'x5'
†Seventh St.	Market St.	Howard St.	1280	"	3' 6"x5' 3"	3'x5'

NORTH POINT DISTRICT—ELEVENTH STREET SUB-DISTRICT.

†Pierce St.	California St.	Sutter St.	1040	.....	.....	3'x5'
†Sutter St.	Pierce St.	Steiner St.	481	Brick.	3'x4' 6"	3'x5'
†Sutter St.	Steiner St.	Fillmore St.	481	"	4' 6"	3'x5'
†Fillmore St.	Sutter St.	Post St.	344	"	4' 6"	3'x5'
*Eleventh St.	Oak St. center extd	Harrison St.	2520	"	6'	3'x5'
†Buchanan St.	O'Farrell St.	McAllister St.	1720	"	.....	3'x5'
†Webster St.	Sutter St.	Turk St.	2064	"	.....	3'x5'
†Steiner St.	Sacramento St.	Sutter St.	1382	"	.....	3'x5'
†Polk St.	Fulton St.	Market St. center.	1130	"	.....	3'x5'
†Market St.	Polk St.	Eleventh St.	375	"	.....	3'x5'
†Grove St.	Gough St.	Franklin St.	481	"	.....	3'x5'
†Franklin St.	Grove St.	Hayes St.	344	"	.....	3'x5'
†Hayes St.	Franklin St.	Van Ness Ave.	481	"	.....	3'x5'
†Van Ness Ave.	Hayes St.	Oak St.	688	"	.....	3'x5'
†California St.	Pierce St.	Scott St.	481	"	.....	3'x5'
†California St.	Scott St.	Devisadero St.	488	"	.....	3'x5'

NORTH POINT DISTRICT—FOURTEENTH STREET SUB-DISTRICT.

*Fulton St.	Masonic Ave.	Lyon St.	978	Brick.	2' 6"x3' 9"	18"
*Fulton St.	Lyon St.	Devisadero St.	1450	"	3'x4' 6"	18"
*Devisadero St.	Fulton St.	Grove St.	344	"	3'x4' 6"	18"
†Devisadero St.	Grove St.	Hayes St.	344	"	3'x4' 6"	3'x5'
†Devisadero St.	Hayes St.	Fell St.	344	"	3'x4' 6"	3'x5'
†Oak St.	Clayton St.	Scott St.	3864	"	.....	3'x5'
†Cole St.	Carl St.	Waller St.	1032	"	.....	3'x5'
†Cole St.	Waller St.	Oak St.	1175	"	3'x4' 6"	3'x5'
†Cole St.	Oak St.	Fell St.	344	"	3' 6"x5' 3"	.....

NORTH POINT DISTRICT—FOURTEENTH STREET SUB-DISTRICT.

†Fell St.	Cole St.	Devisadero St.	3857	Brick.	4' 6'	4'x5'
†Fell St.	Devisadero St.	Scott St.	488	"	5'	4'x5'
†Scott St.	Fell St.	Waller St.	1376	"	5'	4'x5'
†Waller St.	Scott St.	Pierce St.	481	"	5'	4'x5'
†Waller St.	Pierce St.	Fillmore St.	962	"	5' 6'	5'
†Fillmore St.	Waller St.	Thirteenth St.	650	"	5' 6'	5'
†Thirteenth St.	Fillmore St.	Church St.	220	"	5' 6'	5'
†Church St.	Thirteenth St.	Fourteenth St.	632	"	5' 6'	5'
*Fourteenth St.	Church St.	Tow'ds Guerrero.	873	"	3' x4' 6"	5'
†Fourteenth St.	Last named point.	Guerrero St.	450	"	3' x4' 6"	3'x5'
†Fourteenth St.	Guerrero St.	Mission St.	1285	"	3' x4' 6"	3'x5'
†Fourteenth St.	Mission St.	Howard St.	633	"	3' 6"x5' 3"	3'x5'
†Fourteenth St.	Howard St.	Harrison St.	1265	"	6'	6'

NORTH POINT DISTRICT—EIGHTEENTH STREET SUB-DISTRICT.

†Eighteenth St.	Danvers St.	Douglas St.	1150	.....	.....	3'x5'
†Eighteenth St.	Douglas St.	Eureka St.	310	Brick.	2' 6"x3' 9"	3'x5'
†Eighteenth St.	Eureka St.	Noe St.	1588	"	3' x4' 6"	3'x5'
†Eighteenth St.	Noe St.	Church St.	1285	"	3' 6"x5' 3"	3'x5'
†Eighteenth St.	Church St.	Mission St.	2608	"	5' 6"	3'x5'
†Eighteenth St.	Mission St.	Shotwell St.	940	"	6'	3'x5'
*Eighteenth St.	Shotwell St.	Division St.	610	"	6'	6'

*Recommended for immediate construction.

†Existing sewer to be retained.

CHARACTER AND DIMENSIONS OF REQUIRED SEWERS.

NORTH POINT DISTRICT—UPPER TWENTY-SECOND STREET SUB-DISTRICT.

Name of Street.	From	To	Length Feet	Material.	Pre- scribed Size.	Size of Old Sewer.
†Twenty-second St.	Dolores St.....	Guerrero St.....	661	Brick.	2' x3'	3'x5'
†Twenty-second St.	Guerrero St.....	Valencia St.....	642	"	2' 6"x3' 9"	3'x5'
*Twenty-second St.	Valencia St.....	Capp St.....	959	"	3' x4' 6"	16"
*Capp St.....	Twenty-second St.	Twentieth St.....	1168	"	3' 6"x5' 3"	{ C. P. 16"x18" 14"-10" 12"-16"
*Twentieth St.....	Capp St.....	Treat Ave.....	1265	"	3' 6"x5' 3"	
*Treat Ave.....	Twentieth St.....	Nineteenth St....	584	"	3' 6"x5' 3"	12"

NORTH POINT DISTRICT—EAST POTRERO SUB-DISTRICT.

*Pennsylvania Ave.	Twenty-third St..	Twenty-second St.	932	Brick.	2' x3'	.....
*Twenty-second St.	Connecticut St...	Missouri St.....	280	I. S. P.	15"	.....
*Twenty-second St.	Missouri St.....	Texas St.....	200	"	18"	.....
*Twenty-second St.	Texas St.....	Point 10' W. of Mississippi St.	230	"	21"	.....
*Twenty-second St.	Last named point.	Pt.10' W. of E.side Pennsylvania Ave.	370	Brick.	2' x3'	.....
*Twenty-second St.	Last named point.	Iowa St.....	250	"	2' 6"x3' 9"	.....
*Twenty-second St.	Iowa St.....	Kentucky St.....	1120	"	3' x4' 6"	8'-16"-14"
*Kentucky St.....	Twenty-second St.	Twentieth St.....	932	"	3' 6"x5' 3"	16"
*Kentucky St.....	Twentieth St.....	Nineteenth St....	466	"	3' 6"x5' 3"	16"
*Kentucky St.....	Nineteenth St....	Eighteenth St....	466	"	2' 6"x3' 9"	16"
*Kentucky St.....	Eighteenth St....	Mariposa St.....	466	"	2' 6"x3' 9"	.....

NORTH POINT DISTRICT—EAST POTRERO SUB-DISTRICT.

*Nineteenth St....	Kentucky St.....	Tennessee St.....	280	I. S. P.	15"	.....
*Tennessee St....	Nineteenth St....	Eighteenth St....	466	"	15"	16"
*Eighteenth St....	Tennessee St....	Minnesota St....	250	"	18"	16"
*Minnesota St....	Eighteenth St....	Mariposa St.....	466	"	24"	8"
*Mariposa St.....	Iowa St.....	Indiana St.....	280	"	21"	16"
*Mariposa St.....	Indiana St.....	Tennessee St....	560	Brick	2' x3'	12" & 14
*Mariposa St.....	Tennessee St....	Kentucky St.....	280	"	3' 6"x5' 3"	14"
*Mariposa St.....	Kentucky St.....	Illinois St.....	280	"	5'	18"
*Mariposa St.....	Illinois St.....	100' into the bay.	210	"	6'	18"
*Mariposa St.....	Minnesota St....	Indiana St.....	280	I. S. P.	18"	12"
*Mariposa St.....	Indiana St.....	Iowa St.....	280	"	18"	.....
*Mariposa St.....	Iowa St.....	Pennsylvania Ave.	285	"	18"	.....
*Mariposa St.....	Pennsylvania Ave.	Mississippi St....	285	"	24"	.....
*Mississippi St....	Mariposa St.....	Seventeenth St....	466	Brick.	2' x3'	12"
*Seventeenth St....	Mississippi St....	Texas St.....	280	"	2' x3'	.....
*Seventeenth St....	Texas St.....	Carolina St.....	1400	"	2' 6"x3' 9"	.....
*Seventeenth St....	Carolina St.....	De Haro St.....	280	"	4' 6"	.....
*Seventeenth St....	De Haro St.....	Rhode Island St..	280	"	5'	.....
*Rhode Island St..	Seventeenth St....	Sixteenth St.....	473	"	4"	18"
*Rhode Island St..	Sixteenth St.....	Division St.....	1372	"	4"	.....
*Carolina St.....	Seventeenth St....	Mariposa St.....	466	"	2' 6"x3' 9"	.....
*Mariposa St.....	Carolina St.....	Wisconsin St....	280	"	2' 6"x3' 9"	.....
*Mariposa St.....	Wisconsin St....	Arkansas St.....	280	I. S. P.	21"	.....
*Mariposa St.....	Arkansas St.....	Connecticut St...	280	"	15"	.....
*Iowa St.....	Mariposa St.....	Eighteenth St....	466	"	21"	.....
*Indiana St.....	Mariposa St.....	Eighteenth St....	466	"	15"	.....
*Sixteenth St.....	Rhode Island St..	Vermont St.....	560	"	24"	3'x5'
*Sixteenth St.....	Vermont St.....	San Bruno Ave...	280	Brick.	2' x3'	3'x5'
*San Bruno Ave...	Sixteenth St.....	Alameda St.....	939	"	2' 6"x3' 9"	12"
*San Bruno Ave...	Alameda St.....	Division St.....	433	"	3' 6"x5' 3"	12"
*San Bruno Ave...	Alameda St.....	Division St.....	433	I. S. P.	24"	12"
*Ninth and Divi- sion Sts.....	San Bruno Ave...	Harrison St.....	1666	"	24"	3'x5'
*Overflow.....	Nineteenth and Kentucky Sts.....	.....	.....	.....	.....	.....
*Overflows.....	On Mariposa St. and Minnesota St., Mariposa and Indiana, and Mariposa and Iowa streets.....	.....	.....	.....	.....	.....
*Overflow.....	Sixteenth St. and Rhode Island St.	.....	.....	.....	.....	.....
*Overflow.....	Alameda St. and San Bruno Ave.....	.....	.....	.....	.....	.....

*Recommended for immediate construction.

†Existing sewer to be retained.

CHARACTER AND DIMENSIONS OF REQUIRED SEWERS.

NORTH POINT DISTRICT—UPPER ARMY STREET SUB-DISTRICT.

Name of Street.	From	To	Length Feet	Material.	Pre- scribed Size.	Size of Old Sewer.
†Twenty-fourth St.	Castro St.....	Noe St.....	643	Brick.	3' 6"x5' 3"	3'x5'
†Twenty-fourth St.	Noe St.....	Sanchez St.....	643	"	3' 6"x5' 3"	3'x5'
†Sanchez St.....	Twenty-fourth St.	Twenty-fifth St...	584	"	4'	4'x4'
†Twenty-fifth St. Church St. and Twenty-seventh St.....	Sanchez St.....	Dolores St.....	2472	"	4' 6"	3'x5'
†Twenty-seventh St.	Dolores St.....	Guerrero St.....	661	"	5'	5'x5'
†Guerrero St. and Army St.....	Twenty-sev'th St.	San Jose Ave.....	613	"	5'	5'x5'
†Diamond St.....	Twenty-eighth St.	Twenty-sev'th St.	584	I. S. P.	12"	14"
†Diamond St.....	Twenty-sev'th St.	Twenty-sixth St..	584	"	15"	14"
†Diamond St.....	Twenty-sixth St..	Twenty-fourth St.	1168	"	18"	16"

NORTH POINT DISTRICT—UPPER ISLAIS CREEK SUB-DISTRICT—MAIN SEWER.

*Sadowa St.....	Capitol Ave.....	San Jose Ave.....	1300	Brick.	2' 6"x3' 9"	.....
*Sierman Ave. and Wyoming Ave...	San Jose Ave.....	Naglee Ave.....	2114	"	2' 6"x3' 9"	.....
*Wyoming Ave...	Naglee Ave.....	Mt. Vernon Ave..	1460	"	3' 6"x5' 3"	.....
*East Lake Ave.etc.	Mt. Vernon Ave..	Geneva Ave.....	950	"	5'	.....
*Proposed new St.	Geneva Ave.....	Seneca Ave.....	700	"	5' 6"	.....
*Proposed new St. and Cayuga Ave..	Seneca Ave.....	Ocean Ave.....	1550	"	6'	.....
*Proposed new St.	Ocean Ave.....	Jarnac St.produced	1430	"	6' 6"	.....
*Proposed new St.	Jarnac St.produced	Springdale St.....	1150	"	7'	.....
*Springdale St....	Last named point.	Lyell St.....	1000	"	8'	.....
*Springdale St....	Lyell St.....	Mission St.....	1025	"	9' 6"	.....

NORTH POINT DISTRICT—COUNTY LINE WEST SUB-DISTRICT.

†Ocean Ave.....	Howth St.....	Tara St.....	600	I. S. P.	15"	.....
†Ocean Ave.....	Tara St.....	San Jose Ave. .	800	"	21"	.....
†Ocean Ave. and Onondaga Ave....	San Jose Ave.....	Cayuga Ave.....	1540	Brick.	2' x3'	.....
†San Jose Ave.....	Unadilla Ave....	Ocean Ave.....	1496	I. S. P.	18"	.....

NORTH POINT DISTRICT—PERSIA AVENUE SUB-DISTRICT.

†Persia Ave.....	Dublin St.....	Athens St.....	1080	I. S. P.	24"	.....
†Persia Ave.....	Athens Ave.....	Edinburgh St. .	810	Brick.	2' x3'	.....
†Persia Ave.....	Edinburgh St....	Mission St.....	1340	"	2' 6"x3' 9"	.....
†Mission St.....	Persia Ave.....	Onondaga St.....	830	"	3' 6"x5' 3"	.....
†Mission St.....	Amazon St.....	France Ave.....	1200	"	3' x4' 6"	.....
†Mission St.....	France Ave.....	Onondaga Ave....	475	"	4' 6"	.....
†Onondaga Ave....	Mission St.....	Cayuga Ave. .	731	"	5'	.....

NORTH POINT DISTRICT—SILVER AVENUE WEST SUB-DISTRICT.

†China Ave.....	Edinburgh St....	Mission St.....	1340	I. S. P.	18"	.....
*Mission St.....	China Ave.....	Silver Ave.....	1150	"	24"	.....
*Mission St.....	Silver Ave.....	Cuvier St.....	1450	Brick.	2' 6"x3' 9"	.....

NORTH POINT DISTRICT—LOWER ARMY-STREET SUB-DISTRICT—
STORM WATER SEWERS.

†Army St.....	Valencia St.....	Mission St.....	574	Brick.	6'	6'
†Army St.....	Mission St.....	Shotwell St.....	975	"	6' 6"	6' 6"
†Army St.....	Shotwell St.....	Folsom St.....	362	"	7'	7'
†Army St.....	Folsom St.....	San Bruno Ave..	2992	"	7'x8' 6"	7'x8' 6"
†Army St.....	San Bruno Ave..	Kansas St.....	420	"	7'x10'	7'x10'
†Kansas St.....	Army St.....	Marin St.extended	466	"	7'x10'	7'x10'

*Recommended for immediate construction.

†Existing sewer to be retained.

CHARACTER AND DIMENSIONS OF REQUIRED SEWERS.

NORTH POINT DISTRICT—EAST CORTLAND AVENUE SUB-DISTRICT.

Name of Street.	From	To	Length Feet	Material.	Pre- scribed Size.	Size of Old Sewer.
*Waterloo St.....	San Bruno Ave....	Loomis St.....	400	Brick.	3'x4' 6"	.....
*Loomis St.....	Waterloo St.....	Barneveld Ave....	200	"	3'x4' 6"	.....
*Overflow.....	Lee St. and Cortland Ave.					.....
*Overflow.....	Mission St. and Army St.					.....

NORTH POINT DISTRICT—MISSION FLATS SUB-DISTRICT—STORM
WATER SEWERS.

*Division St....	Eighteenth St....	Northerly line Ala- meda St.....	2210	Conc.-Br.	11' 6"x8' 9"	5'x9' 6" 5' 9"x11"
*Division St....	Alameda St.....	Easterly line of Potrero Ave....	1453	"	11' 6"x8' 9"	7' 3"x11' 6"
*Division St....	Potrero Ave.....	King St.....	1578	Conc.	2 compart- ments, 8' 6"x8'	7' 3"x11' 6" &8'6"x11'6" box.
*King St.....	Division St.....	Seventh St.....	650	"	2 compart- ments, 8' 6"x8'	.....
*Seventh St....	King St.....	Channel St.....	647	"	2 compart- ments 9' 6 x8'	3'x5'
*Harrison-Ala- meda.....	Fifteenth St.....	Alabama St.....	621	Brick.	8'	3'x5'
*Division St....	Alameda St.....	Fourth St. ext'd	342	"	8'	7' 3"x11' 6"
*Division St....	Fourth St. ext'd	Tenth St.....	991	"	9'	7' 3"x11' 6"
*Division St....	Tenth St.....	Potrero Ave....	157	"	9'x16'	7' 3"x11' 6"
*Harrison St. re- lief.....	Eleventh St.....	Tenth St.....	490	"	8'	18"
*Tenth St.....	Harrison St.....	Division St.....	1265	"	8'	18"
*Seventh St....	Howard St.....	Folsom St.....	633	"	3' 6"x5' 3"	3'x5'
*Seventh St....	Folsom St.....	Brannan St.....	1898	"	5'	3'x5'
†Sixth St.....	Howard St.....	Tehama St.....	220	"	3' 6"x5' 3"	3'x5'
†Sixth St.....	Tehama St.....	Folsom St.....	413	"	3' 6"x5' 3"	3' 6"x5' 3"

NORTH POINT DISTRICT—MISSION FLATS SUB-DISTRICT—STORM
WATER SEWERS.

†Sixth St.....	Folsom St.....	Brannan St.....	1898	Brick.	5'	5'
*Sixth St.....	Brannan St.....	Channel St.....	1612	"	5' 6"	3'x5'
*Fifth St.....	Howard St.....	Folsom St.....	633	"	5'	3'x5'
*Fifth St.....	Folsom St.....	Brannan St.....	1898	"	5' 6"x11'	5' cir.
*Fifth St.....	Brannan St.....	Channel St.....	1612	"	5' 6"x11'	5' cir.
†Fourth St....	Howard St.....	Folsom St.....	633	I. S. P.	12"	3'x5'
†Fourth St....	Folsom St.....	Harrison St.....	633	"	24"	3'x5'
†Fourth St....	Harrison St.....	Bryant St.....	633	Brick.	3' x4'6"	3'x5'
†Fourth St....	Bryant St.....	Brannan St.....	633	"	4'	3'x5'
†Fourth St....	Bryant St.....	Berry St.....	1300	"	6' 6"	3'x5'
†Fourth St....	Berry St.....	Channel St.....	312	"	6' 6"	box 3'x5'
†Fourteenth St. extended, pro- posed new St..	Harrison St.....	Division St.....	550	"	6'	6'
†Fourth St....	Stevenson St....	Howard St.....	1037	"	.....	3'x5'
†Brannan St....	Division St.....	Ninth St.....	446	"	.....	6'
†Brannan St....	Ninth St.....	Eighth St.....	633	"	.....	6'
†Brannan St....	Eighth St.....	Seventh St.....	908	"	.....	6'
†Brannan St....	Seventh St.....	Sixth St.....	908	"	.....	7'x9'
†Brannan St....	Sixth St.....	Fifth St.....	908	"	.....	7'x9'
†Brannan St....	Fifth St.....	Fourth St.....	908	"	.....	7'x9'
†Brannan St....	Fourth St.....	Third St.....	908	"	.....	7'x9'
†Brannan St....	Third St.....	Second St.....	908	"	.....	7'x9'
†Brannan St....	Second St.....	First St.....	908	"	.....	7'x9'
†Brannan St....	First St.....	Fremont St.....	358	Wood.	.....	7' 6"x9' 6"
*Overflow.....	Brannan St. at Fremont.....					.....
†Overflow.....	Brannan St. at Fourth.....					.....
*Overflow.....	Brannan St. at Fifth.....					.....
†Overflow.....	Brannan St. at Sixth.....					.....

*Recommended for immediate construction.

†Existing sewer to be retained.

CHARACTER AND DIMENSIONS OF REQUIRED SEWERS.

NORTH POINT DISTRICT—MISSION FLATS SUB-DISTRICT, NORTH OF
CHANNEL STREET—SEWAGE ONLY.

	Length Feet	Material.	Pre- scribed Size.	Size of Old Sewer.
*Aggregate sewers in district.....	69705	I. S. P.	8"	.....
*Aggregate sewers in district.....	39325	I. S. P.	10"	.....
*Aggregate sewers in district.....	4040	I. S. P.	12"	.....
*Aggregate sewers in district.....	1730	I. S. P.	15"	.....
*Aggregate sewers in district.....	3130	I. S. P.	18"	.....
*Aggregate sewers in district.....	4090	I. S. P.	21"	.....
*Aggregate sewers in district.....	780	I. S. P.	30"	.....

NORTH POINT DISTRICT—MISSION FLATS SUB-DISTRICT, SOUTH OF
CHANNEL STREET—SEWAGE ONLY.

*Aggregate sewers in district.....	1789	I. S.	8"	.....
*Aggregate sewers in district.....	7803	"	10"	.....
*Aggregate sewers in district.....	2863	"	12"	.....
*Aggregate sewers in district.....	908	"	15"	.....
*Aggregate sewers in district.....	160	"	18"	.....
*Aggregate sewers in district.....	200	C. I. P.	18"	.....

YERBA BUENA DISTRICT—STORM WATER SEWERS.

Name of Street.	From	To	Length Feet	Material.	Pre- scribed Size.	Size of Old Sewer.
*Commercial St....	Sansome St.....	Drumm St.....	1375	Brick.	5'	3'x5'
†Drumm St.....	Market St.....	California St.....	150	"	3'x5'	.....
†Drumm St.....	California St.....	Commercial St.....	515	"	.....	3'x5'
*Drumm St.....	Commercial St.....	Jackson St.....	815	"	5' 6"	.....
*Drumm St.....	Jackson St.....	East St. N.....	520	"	7' 6"	.....
†Howard St.....	Second St.....	East St. S.....	2915	"	.....	3'x5'
*Mission St.....	Second St.....	First St.....	908	"	3'x4' 6"	.....
*Mission St.....	First St.....	East St. S.....	2007	"	.....	3'x5'
†Market St.....	Sutter St.....	Drumm St.....	1500	"	.....	3'x5'
†Bush St.....	Sansome St.....	Market St.....	653	"	.....	3'x5'
†California St.....	Sansome St.....	Drumm St.....	1375	"	.....	3'x5'
*Outfall.....	Drumm St.....	The Bay.....	200	"	7' 6"	.....

YERBA BUENA DISTRICT—SEWAGE ONLY.

*Aggregate sewers in district.....	28410	I. S. P.	8"	.....
*Aggregate sewers in district.....	30102	"	10"	.....
*Aggregate sewers in district.....	1295	"	12"	.....
*Aggregate sewers in district.....	2665	"	15"	.....
*Aggregate sewers in district.....	260	"	18"	.....
*Aggregate sewers in district.....	580	"	21"	.....

HUNTER'S POINT DISTRICT—UNIVERSITY MOUND SUB-DISTRICT.

*Goettingen St....	Wayland St.....	Bacon St.....	460	Brick.	5' 6"	.....
*Bacon St.....	Goettingen St....	Berlin St.....	300	"	5' 6"	.....
*Berlin St.....	Bacon St.....	Burrows St.....	460	"	5' 6"	.....
*Burrows St.....	Berlin St.....	Girard St.....	300	"	5' 6"	.....
*Girard St.....	Burrows St.....	Felton St.....	460	"	5' 6"	.....
*Felton St.....	Girard St.....	San Bruno Ave...	300	"	5' 6"	.....
*San Bruno Ave...	Felton St.....	Silliman St.....	460	"	5' 6"	.....
*San Bruno Ave...	Silliman St.....	Silver Ave.....	460	"	3' 6"x5' 3"	.....
*San Bruno Ave...	Silver Ave.....	Gaven St.....	640	"	3'x4' 6"	.....

HUNTER'S POINT DISTRICT—SOUTH BERNAL HEIGHTS SUB-DISTRICT.

†Andover Ave.....	East Ave.....	Crescent Ave.....	783	I. S. P.	21"	21"
†Crescent Ave.....	Andover Ave.....	Prentiss St.....	1270	"	24"	24"
*Prentiss St. and proposed new St.	Crescent Ave.....	Sweeny St.....	1130	Cast Iron.	12"	.....
*Prentiss St. and proposed new St.	Crescent Ave.....	Islais Creek.....	800	Brick.	5"	.....
*Overflow.....	Crescent Ave. and	Prentiss St.....	.....	.....	.....	.....

*Recommended for immediate construction.

†Existing sewer to be retained.

**CHARACTER AND DIMENSIONS OF REQUIRED SEWERS.
HUNTER'S POINT DISTRICT—MAIN SEWAGE.**

Name of Street.	From	To	Length Ft.	Material.	Pre- scribed Size.	Size of Old Sewer.
†Proposed new St., Canal, Congdon, Trumbell Sts., and proposed new St.	Springdale and Milton Sts.....	Harvard St. ext'd.	2180	Brick.	7' 6"	.....
†Proposed new St..	Harvard St. ext'd.	Relief outlet.....	1300	"	8'	.....
†Proposed new St..	Relief outlet.....	Southerly.....	1005	I. S. P.	18"	.....
†Proposed new St..	Last named point.	Northeasterly....	760	"	24"	.....
†Proposed new St..	Last named point.	Boylston St.....	750	Brick.	2'x3'	.....
*Sweeny St.....	Boylston St.....	Barneveld Ave....	1140	"	3'x4' 6"	.....
*Barneveld Ave. and Gaven St....	Sweeny St.....	W. side San Bru- no Ave.....	500	"	3'x4' 6"	.....
*Steuben and Au- gusta Sts.....	W. side San Bru- no Ave.....	Charter Oak Ave..	690	Tunnel.	3'x4' 6"	.....
*Charter Oak Ave..	Augusta St.....	Helena St.....	760	"	3'x4' 6"	.....
*Helena St., S St. S., and Seventh Ave. S.....	Charter Oak Ave..	R St. S.....	2184	"	3'x4' 6"	.....
*R St. S.....	Seventeenth Av. S.	E. side Sixteenth Ave. S.....	320	"	3' 6"x5' 3"	.....
*R St. S.....	E. side Sixteenth Ave. S.....	Fifteenth Ave. S..	240	Brick.	3' 6"x5' 3"	.....
*Fifteenth Ave. S..	R St. S.....	Southerly.....	310	"	3' 6"x5' 3"	.....
*Fifteenth Ave. S..	Last named point.	Q St. S.....	354	Tunnel.	3' 6"x5' 3"	.....
*Q St. S. and Four- teenth Ave. S....	Fifteenth Ave. S..	P St. S.....	944	"	5'	.....
*P St. S.....	Fourteenth Ave. S.	E. side Thirteenth Ave. S.....	320	"	5' 6"	.....
*P St. S. and Tenth Ave. S.....	E. side Thirteenth Ave. S.....	Railroad Ave.....	1482	Brick.	5' 6"	.....
*N St. S.....	Railroad Ave.....	Seventh Ave. S...	840	"	6'	.....
*Seventh Ave. S...	N St. S.....	M St. S.....	664	"	6' 6"	.....
*M St. S.....	Seventh Ave. S...	Sixth Ave. S.....	280	"	6' 6"	.....
*Sixth Ave. S.....	M St. S.....	Southerly.....	264	"	6' 6"	.....
*Sixth Ave. S. and L St. S.....	Last named point.	W. line Fifth Av. S.	640	Tunnel.	6' 6"	.....
*L St. S. and Fifth Ave. S.....	W. line Fifth Av. S.	K St. S.....	704	Brick.	6' 6"	.....
*Fifth Ave. S.....	K St. S.....	Southerly.....	214	"	7'	.....
*Fifth Ave. S.....	Last named point.	J St. S.....	450	Tunnel.	7' 6"	.....
*Fifth Ave. S.....	J St. S.....	136' S. of I St. S.	800	"	7' 6"	.....
*Fifth Ave. S.....	Last named point.	H St. S.....	528	Brick.	7' 6"	.....

HUNTER'S POINT DISTRICT—SOUTH SLOPE OF HUNTER'S POINT SUB-DISTRICT.

*Nineteenth Ave. S.	J St. S.....	H St. S.....	1328	Brick.	2'x3'	.....
*H St. S.....	Nineteenth Ave. S.	Seventeenth Av. S.	560	"	3'x4' 6"	.....
*Seventeenth Av. S.	H St. S.....	G St. S.....	664	"	3' 6"x5' 3"	.....
*G St. S.....	Seventeenth Av. S.	Fifteenth Ave. S..	560	"	3' 6"x5' 3"	.....
*Fifteenth Ave. S..	G St. S.....	F St. S.....	604	"	4' 6"	.....

MILE ROCK [NORTHWEST OF PT. LOBOS] DISTRICT—OCEAN VIEW SUB-DISTRICT—SEWAGE ONLY.

*Stanley St.....	Orizaba Ave.....	Vernon St.....	1560	I. S. P.	10"	.....
*Main outfall sewer along proposed right of way.....	Stanley St. and Ver- non St. northwest- terly & northerly.	Holloway Ave. ex- tended.....	4200	"	12"	.....
*Main outfall sewer along proposed right of way.....	Holloway Ave. extended northerly....		1550	C. I. P. on trestle.	15"	.....
*Main outfall sewer along proposed right of way.....	Thence northwesterly and northerly...		1100	I. S. P.	18"	.....
*Main outfall sewer along proposed right of way.....	Northerly.....		300	C. I. P. on trestle.	18"	.....
*Main outfall sewer along proposed right of way.....	Northwesterly....	Parkside Ave.....	1150	I. S. P.	21"	.....
*Parkside Ave.....	Last named point	westerly.....	6000	"	21"	.....
*Parkside Ave.....	Thence.....	Great highway....	2900	"	21"	.....
*Ocean Ave.....	Lee Ave.....	1500' west of In- gleside Inn.....	7500	"	10"	.....
*Across Ingleside racetrack grounds	Arlington Avenue	*Main outfall sewer	2950	"	18"	.....
†Along proposed right of way.....	San Miguel Rancho line about 800' S. of Ocean Ave. Wly..	Main outfall sewer	500	"	10"	.....

*Recommended for immediate construction.

†Not recommended for immediate construction.

CHARACTER AND DIMENSIONS OF REQUIRED SEWERS.
HARBOR VIEW DISTRICT.

Name of Street.	From	To	Length Feet	Material.	Pre- scribed Size.	Size of Old Sewer.
†Broadway St.....	Hyde St.....	Larkin St.....	481	Brick.	2' x3'	3'x5'
†Broadway St.....	Larkin St.....	Polk St.....	481	"	2' 6"x3' 9"	3'x5'
†Polk St.....	Broadway St.....	Vallejo St.....	350	"	3' x4' 6"	3'x5'
†Vallejo St.....	Polk St.....	Franklin St.....	962	"	3' x4' 6"	3'x5'
†Franklin St.....	Vallejo St.....	Union St.....	688	"	3' x4' 6"	3'x5'
†Franklin St.....	Union St.....	Lombard St.....	1032	"	3' 6"x5' 3"	3'x5'
†Lombard St.....	Franklin St.....	Gough St.....	481	"	3' 6"x5' 3"	3'x5'
†Lombard St.....	Gough St.....	Octavia St.....	481	"	4' 6"	3'x5'
*Lombard St.....	Octavia St.....	Laguna St.....	481	"	5'	3'x5'
*Laguna St.....	Lombard St.....	Chestnut St.....	344	"	5'	10"
†Greenwich St.....	Gough St.....	Octavia St.....	481	"	2' 6"x3' 9"	3' 6"
†Octavia St.....	Greenwich St.....	Lombard St.....	344	"	2' 6"x3' 9"	4' "
*Laguna St.....	Chestnut St.....	Jefferson St.....	1720	"	5'	} 10"-12" 18"-20"
*Laguna St.....	Jefferson St.....	Tonquin St.....	344	"	5' 6"	
*Laguna St.....	Tonquin St.....	The bay.....	459	"	5' 6"	.....
†Laguna St.....	Green St.....	Filbert St.....	688	I. S. P.	21"	3'x5'
†Laguna St.....	Filbert St.....	Lombard St.....	688	Brick.	2' 6"x3' 9"	3'x5'
†Lombard St.....	Laguna St.....	Buchanan St.....	481	"	2' 6"x3' 9"	3'x5'
†Lombard St.....	Buchanan St.....	Fillmore St.....	962	"	3' x4' 6"	3'x5'
†Fillmore St.....	Lombard St.....	Francisco St.....	688	"	3' 6"x5' 3"	3'x5'
*Francisco St.....	Fillmore St.....	Pierce St.....	962	"	3' 6"x5' 3"	} Wooden box sewer. 275' of 3'x5'
*Pierce St.....	Francisco St.....	Lewis St.....	2104	"	6'	
*Pierce St.....	Lewis St.....	The bay.....	275	"	6' 6"	.....
†Pierce St.....	Chestnut St.....	Francisco St.....	344	"	2' 6"x3' 9"	3'x5'
*Francisco St.....	Scott St.....	Pierce St.....	481	"	3' x4' 6"	.....
†Union St.....	Lyon St.....	Baker St.....	427	I. S. P.	24"	12"
†Baker St.....	Union St.....	Greenwich St.....	688	Brick.	2' x3'	16"
†Baker St.....	Greenwich St.....	Francisco St.....	1032	"	2' 6"x3' 9"	} 14"x 16"&18" 18"
†Baker St.....	Francisco St.....	Tonquin St.....	1720	"	5'	
†Broderick St.....	Lombard St.....	Chestnut St.....	344	I. S. P.	24"	.....
†Broderick St.....	Chestnut St.....	Francisco St.....	344	Brick.	2' x3'	.....
†Francisco St.....	Broderick St.....	Baker St.....	481	"	3' x4' 6"	.....
†Baker St.....	Tonquin St.....	The bay.....	659	"	5'	18"
†Outfall.....	Pierce St.....	In the bay.....	800	C. I. P.	30"	.....
*Overflow.....	Laguna and Chestnut Sts.....	.....	.....	.....	.....	.....
*Overflow.....	Laguna and Tonquin Sts.....	.....	.....	.....	.....	.....
†Overflow.....	Baker and Tonquin Sts.....	.....	.....	.....	.....	.....

*Recommended for immediate construction.

†Existing sewer to be retained.

CHARACTER AND DIMENSIONS OF REQUIRED SEWERS.

MILE ROCK [NORTHWEST OF PT. LOBOS] DISTRICT—UPPER AND LOWER SUNSET SUB-DISTRICTS.

SEWERS FOR STORM-WATER.

Name of Street	From	To	Length Feet	Material	Pre-scribed Size	Size of Old Sewer
*Great Highway...	Ocean Ave.....	U St.....	1600	Rein.conc.	2' 6"x3' 9"	.....
*Great Highway...	U St.....	S St.....	1360	"	3' x4' 6"	.....
*Forty-eighth Ave.	S St.....	L St.....	4760	"	3' x4' 6"	.....
*Forty-eighth Ave.	L St.....	H St.....	2720	"	3' 6"x5' 3"	.....
*Forty-eighth Ave.	H St.....	C St.....	3400	"	4' 6"	.....
‡Seventh Ave.....	L St.....	H St.....	2720	Brick.	3' x4' 6"	3'x4' 6" 4' 6"x 5' 3 1/2"
‡H St.....	Seventh Ave.....	Tenth Ave.....	930	"	4' 6"	.....
‡H St.....	Tenth Ave.....	Fourteenth Ave..	1240	"	6'	6'
‡H St.....	Fourteenth Ave..	Twentieth Ave..	1890	"	6'	6'x7' 1 1/2"
‡H St.....	Twentieth Ave..	Fortieth Ave.....	6200	Rein.conc.	6'	.....
*Across Park.....	Fortieth Ave. and H St.....	Forty-eighth Ave. and Fulton St..	3720	"	6' 6"	.....
*Forty-eighth Ave.	Fulton St.....	C St.....	600	"	6' 6"	.....
‡Tenth Ave.....	L St.....	K St.....	680	"	2' 3"	.....
‡K St.....	Tenth Ave.....	Eleventh Ave.....	310	"	2' 3"	.....
‡K St.....	Eleventh Ave.....	Twelfth Ave.....	310	"	2' 6"x3' 9"	.....
‡Twelfth Ave.....	K St.....	J St.....	620	"	2' 6"x3' 9"	.....
‡J St.....	Twelfth Ave.....	Fourteenth Ave..	620	"	2' 6' x3' 9"	.....
‡Fourteenth Ave..	J St.....	340' northerly...	340	"	3' x4' 6"	.....
‡Fourteenth Ave..	Last named point.	H St.....	1020	"	3' 6"x5' 3"	.....
*Twentieth Ave....	H St.....	I St.....	680	Rein.conc.	4' 6"	.....
*Twentieth Ave....	I St.....	K St.....	1360	"	3' 6"x5' 3"	.....
*Twentieth Ave....	K St.....	L St.....	680	"	3' x4' 6"	.....
*Forty-fifth Ave...	U St.....	T St.....	1670	"	7' 3"	.....
*U St.....	Forty-fifth Ave..	Forty-sixth Av..				
*Forty-sixth Ave...	T St.....	S St.....	1360	"	8' 6"	.....
*Forty-sixth Ave...	S St.....	Q St.....				
*Forty-sixth Ave...	Q St.....	P St.....	680	"	8' 9"	.....
*Forty-sixth Ave...	P St.....	N St.....	1360	"	9'	.....
*N St.....	Forty-sixth Ave..	Forty-seventh..	1670	"	9' 3"	.....
*Forty-seventh Av.	N St.....	L St.....				
*L St.....	Forty-seventh Av.	Forty-eighth..	5440	"	9' 6"	.....
*Forty-eighth Ave.	L St.....	C St.....				
*Forty-eighth Ave.	C St.....	Ocean.....	4500	Tunnel.	8'x16'	.....
*Tunnel for sewage only.....	Storm water tun- nel.....	Ocean.....	1600	"	7' 4'x5'	.....

VISITACION VALLEY DISTRICT

TO DISCHARGE IN BAY NEAR COUNTY LINE.

*San Bruno Ave...	Somerset St.....	Visitacion St....	1400	I. S. P.	24"	.....
*San Bruno Ave.	Visitacion St.....	Sunnydale Ave...	680	Rein.conc.	3' 6"x5' 3"	.....
*Sunnydale Ave....	Schwerin St.....	Cora St.....	480	"	3'x4'	.....
*Sunnydale Ave....	Cora St.....	Milliken St.....	1385	"	3' 6"x5' 3"	.....
*Sunnydale Ave...	Milliken St.....	Bay.....	1500	Wood box	5'x5'	.....

*Recommended for immediate construction.

‡Existing sewer to be retained.

ESTIMATE OF COST.

The sewers and work recommended for construction in this report are covered by the following estimates of cost. The costs are based on the same classes of material and construction as were used in the estimates made by City Engineer C. E. Grunsky in a report on a System of Sewers made to the Board of Public Works and dated June 30th, 1903.

1. Hunter's Point main sewer, sub-mains and main sewers in the Bay View and in Visitacion Valley districts...	\$ 418,549.00
2. North Point main relief outlets and special structures, mains and sub-mains in the portion of the North Point district south of College Hill.....	1,664,411.00
3. Mains and sub-mains in Harbor View and North Beach districts	243,974.00
4. Main and sub-mains tributary to Mile Rock outfall, including sub-mains from the Ingleside, Sunset and West Richmond districts.....	630,339.00
5. Storm sewers and special structures, sewage sewers and pumping station in Mission Flats district.....	312,727.00
6. Storm sewers and special structures, sewage sewers and pumping station in Yerba Buena district.....	200,000.00
Real estate, rights of way, grade changes, etc.....	250,000.00
Preparation of plans, specifications and inspection.....	280,000.00
Total	\$4,000,000.00

I would note that during the past seven years the following sewers have been constructed in accordance with the herein proposed plan, at a cost of \$636,702.42. They represent about one-tenth of the required work:

H street from Seventh to Twentieth avenues.
Mission street from Amazon avenue to Persia avenue.
Amazon avenue from Mission street to London street.
Persia avenue from Mission street to Dublin street.
Mission street from Second to Third streets.
Cole street from Oak street to Fell street.
California street from Twenty-fourth avenue to Thirty-first avenue.
Twenty-fourth avenue from California street to Lake street.
China avenue from Paris street to Edinburgh street.
Van Ness avenue and Vallejo street.
Valencia street from Eighteenth to Nineteenth streets.
Howard street from Seventeenth to Eighteenth streets.
Fourth street from Howard street to Channel street.
Sixth street from Howard to Brannan streets, together with the lateral sewers on the adjacent streets.
Baker street from Union street to the bay, together with the lateral sewers in the adjacent streets.
Ocean avenue and Onondaga avenue, from Howth street to Islais Creek.
San Jose avenue from Mt. Vernon avenue to Ocean avenue.
Tenth avenue, K street, Twelfth avenue, J street and Fourteenth avenue from L street to H street.
Seventh avenue from H to L streets.
Market street and Seventh street, from Jones street to Howard street.
Fourteenth street from Valencia street to Howard street.
Harrison street, from Fourth to Sixth streets.
Haight street from Steiner street to Pierce street.
Dore street from Bryant street to Brannan street.
Steuart street from Market street to Mission street.
Market street from First street to East street.
Drumm street from Market street to Commercial street.
Mission street from Sixth street to Eighth street.
Mission street and Seventh street.
A temporary pumping station on Commercial street near Drumm street.

A temporary pumping station on Fourth street near Berry street.

Respectfully submitted,

MARSDEN MANSON,
City Engineer.

UNIVERSITY OF CALIFORNIA LIBRARY
BERKELEY

Return to desk from which borrowed.

This book is DUE on the last date stamped below.

REC. CTR. MAY 29 1986

19 Oct '49 WM

13 May '55 SS

OCT 10 1955 LU

OCT 30 1979

REC. CTR. AUG 15 1979

OCT 25 1984

Oct 25, 85

MAY 15 1986

YC104945

GENERAL LIBRARY - U.C. BERKELEY



8000915559

M262666 TD525
S28A27

THE UNIVERSITY OF CALIFORNIA LIBRARY

